

AMENDMENTS TO THE CLAIMS

1. (Original) A product for electronic transmission of handwritten information, comprising:

at least one writing area for the handwritten information, wherein the writing area comprises a position-coding pattern comprising a plurality of first symbols and wherein an arbitrary position area of a predetermined first size of the position-coding pattern unambiguously defines a position on the product; and

an address area indicating an address to which the handwritten information is to be sent, wherein the address area comprises an address-coding pattern comprising a plurality of second symbols and wherein an arbitrary address portion of a predetermined second size of the address-coding pattern unambiguously defines part of the address.

2. (Original) A product as claimed in claim 1, wherein the predetermined first size of the arbitrary position area required to unambiguously determine a position from the position-coding pattern is at least the same size as the predetermined second size of the arbitrary address portion required to unambiguously define part of the address from the address-coding pattern.

3. (Original) A product as claimed in claim 1, wherein the part of the address is an individual character.

4. (Original) A product as claimed in claim 1, wherein the address area further comprises information that defines a communication medium for transmission of the handwritten information.

5. (Original) A product as claimed in claim 1, wherein the position-coding pattern defines coordinates within a partial code area, which is part of a larger virtual code area, and the address area further comprises information that defines the coordinates for at least part of the writing area.

6. (Original) A product as claimed in claim 1, wherein the address-coding pattern comprises a plurality of sequence portions based on the plurality of second symbols and wherein the arbitrary address portion that is required to define part of the address comprises a predetermined number of sequence portions of a predetermined length.

7. (Original) A product as claimed in claim 6, wherein each sequence portion comprises at least one subsequence of a sequence and wherein each subsequence is of a predetermined length and unambiguously defines a sequence value, which corresponds to the position of the subsequence in the sequence.

8. (Original) A product as claimed in claim 7, wherein a difference between a sequence value defined by a subsequence of a first sequence portion and a sequence value defined by a subsequence of a second sequence portion is constant and independent of parts of the sequence portions from which subsequences are selected when the subsequences are fetched from corresponding parts of the sequence portions.

9. (Original) A product as claimed in claim 8, wherein the difference value is represented as a binary value, a first part of the binary value representing a character and a second part of the binary value representing part of a position indication for the sequence portions in a matrix.

10. (Original) A product as claimed in claim 1, wherein the second symbols in the address-coding pattern are of a different size from the size of the first symbols in the position-coding pattern.

11. (Original) A product as claimed in claim 1, wherein the second symbols in the address-coding pattern are arranged with an interspace different from that of the first symbols in the position-coding pattern.

12. (Original) A product as claimed in claim 1, wherein the address area also codes a public key, wherein a receiver specified by the address can decode a message that has been coded with the public key.

13. (Original) A product as claimed in claim 1, wherein the address area is divided into a plurality of code fields each of which codes a partial code area of a virtual code area, each partial code area corresponding to a character.

14. (Original) A product as claimed in claim 13, wherein the code fields are separated by separation fields means.

15. (Canceled).

16. (Currently Amended) An apparatus as claimed in ~~claim~~ claim 18, further comprising a pen point, wherein the reading head is adapted to record images when the pen point is pressed against a surface.

17. (Currently Amended) An apparatus as claimed in ~~claim~~ claim 18, further comprising:

means for converting a first part of characters stored in the memory to an address and a second part of characters stored in the memory to position information which defines a writing area; and

means for transmitting only positions contained in the writing area to the address.

18. (Currently Amended) ~~An apparatus according to claim 15, further comprising~~ An apparatus for electronically transmitting handwritten information written on a surface having a handwritten information area having a position-coding pattern imprinted thereon and an address area having an address-coding pattern imprinted thereon, comprising:

a reading head adapted to optically record images from the surface;

a memory;

means for converting a recorded image to at least one position and storing the position in the memory based on the position-coding pattern contained in the recorded image which codes at least one position;

means for converting another recorded image to at least one character and storing the character in the memory based on an the address-coding pattern contained in the recorded image which codes at least one character;

means for transmitting at least part of positions stored in the memory to an address associated with the characters stored in the memory; and

means for converting recorded images of the address-coding pattern to a set of sequence portions, converting the set of sequence portions to a set of sequence values, and converting the sequence values to characters based on information stored in the memory.

19. (Currently Amended) An apparatus as claimed in ~~claim~~ claim 18, further comprising means for enclosing an identification number when transmitting information to the address wherein the identification number is unique for each user unit.

20. (Canceled).

21. (Currently Amended) ~~A method as claimed in claim 20, further comprising the steps of~~ A method for entering handwritten information written on a surface having a handwritten information area having a position-coding pattern imprinted thereon and an address area having a address-coding pattern imprinted thereon, and transmitting the handwritten information, the method comprising:

reading an input signal corresponding to a recorded image from the handwritten information area;

converting the recorded image from the handwritten information area to at least one position and storing the position based on the position-coding pattern corresponding to the recorded image to thereby record the handwriting;

reading an input signal corresponding to a recorded image from the address area;

decoding the address-coding pattern in the recorded image from the address area to at least one character and storing the character based on the address-coding pattern corresponding to the recorded image;

transmitting stored positions to an address corresponding to characters stored in the memory; and

converting part of the stored characters to writing position information that defines a writing area, and transmitting only positions contained in the writing area to the address.

22. (Canceled).

23. (Previously Presented) The product of claim 1 wherein said position on the product has a resolution smaller than the size of the arbitrary position area.

24. (Currently Amended) The apparatus of ~~claim 15~~claim 18 wherein an arbitrary position area of a predetermined first size of

the position-coding pattern unambiguously defines a position on the surface, said apparatus converting said image to at least one position despite arbitrary position of said reading head on said pattern.

25. (Currently Amended) The apparatus of ~~claim 15~~claim 18 wherein an arbitrary position area of a predetermined second size of the address-coding pattern unambiguously defines an address despite arbitrary position of said reading head on said pattern, said apparatus converting said image to at least one character despite arbitrary position of said reading head on said pattern.

26. (Previously Presented) The apparatus of claim 24 wherein the position on the surface has a resolution smaller than the size of the arbitrary position area.

27. (Currently Amended) The method of ~~claim 20~~claim 21 wherein an arbitrary position area of a predetermined first size of the position-coding pattern unambiguously defines a position on the surface, said step of converting said the recorded image from the handwritten information area to at least one position performs the conversion despite arbitrary position of said reading head on said pattern.

28. (Currently Amended) The method of ~~claim 20~~claim 21 wherein an arbitrary position area of a predetermined second size of the address-coding pattern unambiguously defines an address despite arbitrary position of said reading head on said pattern, said step of decoding the address-coding pattern in the recorded image from the address area to at least one character performing the decoding despite arbitrary position of said reading head on said pattern.

29. (Currently Amended) The method of ~~claim 20~~claim 21 wherein said step of decoding the address-coding pattern in the recorded image from the address area to at least one character includes calculating the characters directly from said address coding pattern.

30. (Currently Amended) The method of ~~claim 20~~claim 21 wherein the position on the surface has a resolution smaller than the size of the arbitrary position area.

31.-35. (Canceled).

36. (Previously Presented) The product of claim 1, wherein the address to which the handwritten information is to be sent is a predetermined address.

37. (Previously Presented) The product of claim 4, wherein the information that defines a communication medium for transmission of the handwritten information is predetermined.

38. (Previously Presented) The product of claim 5, wherein the information that defines the coordinates for at least part of the writing area is predetermined.

39. (Currently Amended) ~~The apparatus of claim 15,~~ An apparatus for electronically transmitting handwritten information written on a surface having a handwritten information area having a position-coding pattern imprinted thereon and an address area having an address-coding pattern imprinted thereon, comprising:

a reading head adapted to optically record images from the surface;

a memory;

means for converting a recorded image to at least one position and storing the position in the memory based on the position-coding pattern contained in the recorded image which codes at least one position;

means for converting another recorded image to at least one character and storing the character in the memory based on an the address-coding pattern contained in the recorded image which codes at least one character;

means for transmitting at least part of positions stored in the memory to an address associated with the characters stored in the memory; and

wherein the address to which the handwritten information is to be transmitted is predetermined.

40. (Currently Amended) The method of ~~claim 20~~claim 21, wherein the address to which the handwritten information is to be transmitted is predetermined.

41. (Canceled).

42. (Previously Presented) The product of claim 1, wherein the position-coding pattern codes each position with the plurality of first symbols, and wherein each of the plurality of first symbols contributes to the coding of a plurality of positions.

43. (Currently Amended) ~~The apparatus of claim 15,~~ An apparatus for electronically transmitting handwritten information written on a surface having a handwritten information area having a position-coding pattern imprinted thereon and an address area having an address-coding pattern imprinted thereon, comprising:

a reading head adapted to optically record images from the surface;

a memory;

means for converting a recorded image to at least one position and storing the position in the memory based on the position-coding pattern contained in the recorded image which codes at least one position;

means for converting another recorded image to at least one character and storing the character in the memory based on an the address-coding pattern contained in the recorded image which codes at least one character;

means for transmitting at least part of positions stored in the memory to an address associated with the characters stored in the memory; and

wherein the position-coding pattern codes each position with the plurality of first symbols, and wherein each of the plurality of first symbols contributes to the coding of a plurality of positions.

44. (Currently Amended) The product of ~~claim 20~~claim 21, wherein the position-coding pattern codes each position with the plurality of first symbols, and wherein each of the plurality of first symbols contributes to the coding of a plurality of positions.

45. (Canceled).

46. (Previously Presented) The method of claim 29, wherein the step of decoding performs the calculating step without the use of a look-up table.

47. (Currently Amended) The apparatus as set forth in ~~claim 15~~claim 18, wherein the at least one character converted from another recorded image is based on the address-coding pattern determined wholly from the recorded image.

48. (Currently Amended) The method of ~~claim 20~~claim 21, wherein the at least one character converted from another recorded image is based on the address-coding pattern determined wholly from the recorded image.

49. (Currently Amended) The method of ~~claim 20~~claim 21, further comprising providing for a surface having the position-coding pattern and an address-coding pattern associated therewith.